(40%) were females. 23 (53.5%) had high risk cytogenetics and 19 (44%) had non-denovo AML. There was no statistically significant difference in cytogentic risk (p = 0.56) or diagnosis of non denovo AML (p = 0.18) between the transplant and the non transplant groups.
Outcomes: CR rate including CR without platelet recovery (CRp) was 88 % with no induction related deaths. Of the 38 patients who went into remission 7 (18%) relapsed at a later time point. Median follow up of the entire cohort was 181days (24 to 987). 20 (47%) patients were able to proceed to transplant, 6 underwent autologous SCT, 12 underwent allogeneic SCT and 2 underwent autologous SCT followed by an allogeneic SCT at relapse. The median time to first SCT since induction was 115 days (32 - 195). Median OS was 11.3 months. Median OS of the patients who underwent SCT is *not reached vs 5.1 months for the non transplant group (p = 0.0055). Median PFS of patients who underwent SCT was *not reached vs 5.9 months for the non transplant group, (p = 0.0229).
Conclusions: In this high risk AML population, HiDAC/MITO induction was well tolerated and demonstrated an excellent CR/CRp rate of 88% with no induction deaths. Substantial number (47%) of patients proceeded to SCT and had a significantly better outcome (both OS and PFS).

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ALLOGENEIC STEM CELL TRANSPLANTATION (ALLO-SCT) IN THE ELDERLY PATIENTS (AGE > 65 YEARS) WITH ACUTE MYELOID LEUKEMIA (AML) IS SAFE AND EFFECTIVE

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Introduction: AML patients over age 65 years have a poor outcome with a median survival of 2 months and a 2-year survival rate of 6% (Menzin et al *Arch Intern Med.* 2002). Allo-SCT is curative in AML but is frequently not offered to older patients because of the concern of high mortality associated with this procedure.
Methods: Retrospective analysis was performed on all patients with AML over age 65 years who underwent an allo-SCT at UMass Memorial Medical Center since 2009. The study was approved by UMass Memorial Medical Center IRB.
Results: 9 patients were identified from the database. There were 6 men and 3 women. Median age at SCT was 69 years range (65-78). 4 patients were ≥70 years of age. Disease status at SCT was complete remission (CR) in 4 (44%) and persistent disease in 5 (56%) patients. Median number of chemotherapy cycles prior to SCT was 3 range (1-14). 1 patient had 2 prior autologous SCT. 5 (55%) patients had poor prognostic cytogenetics (including Flt-3 ITD) and 6 (67%) patients had preceding MDS. Median time from diagnosis to SCT was 197 days range (105-2240). Stem cell source was single cord blood (CB) unit in 3 and unrelated donor in 6 patients. Preparative regimen was myeloablative in 4 (Thiotepa10mg/kg/Flu/Mel 140mg/m2/rabbitATG in 3 CB-SCT; Flu/Bu3.2mg/kg x 3/ATG in 1) and reduced intensity in 5 patients (Flu/Bu3.2mg/kg x 2/ ATG). Graft versus host disease (gvhd) prophylaxis was tacrolimus/mycophenolate mofetil (MMF) in 6 and sirolimus/MMF in 3 subjects. Median number of stem cell infused was 4.99 x10^6 /kg range (1.7 x10^5- 6.14 x10^6). All 9 patients engrafted with full donor chimerism and were in CR post SCT. Median time for neutrophil engraftment was 18 days range (13-41) and platelet engraftment was 13 days range (11-73). Grade II-IV acute gvhd developed in 2 patients. Day 100 survival was 8/9 (89%). The Kaplan-Meier Product-Limit estimates show that the long-term survival probability is 0.78 and is stable at that level after 6 months. Four patients have survival times longer than one year with two patients surviving beyond two years. No patient relapsed post SCT. All surviving patients have Karnofsky performance score ≥80. 2 patients are off all immunosuppressant therapy.
Conclusion: Allogeneic SCT is safe and effective treatment modality for elderly AML patients. This treatment modality needs to be validated in prospective clinical trials.

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EFFECT OF PRE-TRANSPLANT CHEMOTHERAPY BEFORE HUMAN LEUKOCYTE ANTIGEN IDENTICAL SIBLING TRANSPLANTATION FOR ACUTE MYELOGENOUS LEUKEMIA IN FIRST COMPLETE REMISSION

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Background: Pre-transplant consolidation therapy for patients with AML in the first complete remission (CR) decreases leukemia recurrence and improves survival.
Patients and Methods: 29 AML patients (15 females and 14 males) with a median age of 33 years (range 18-63) enrolled from Feb. 2010 to Oct. 2011 were randomly allocated into two groups. 14 patients in the first group (A) received 7+3 chemotherapy regimen (cytarabine 100mg/m^2/day for 7 days+ idarubicin 12mg/m^2/day for 3 days) prior to hematopoietic stem cell transplantation (HSCT) and 15 patients in the second group (B) received 7+3 regimen followed by 5+2 (cytarabine 100mg/m^2/day for 5 days+ idarubicin 12mg/m^2 for 2 days) before HSCT. All Patients were in complete remission before transplantation. Peripheral blood stem cells were the preferred source for transplantation.
Results: The median time from diagnosis to transplant was 70.5 days in the B and 171 in the A group. The median time to absolute neutrophil count ≥ 0.5*10^9/L was +13 days in the B and + 14 in the A group (p = 0.18). The median time to platelet count ≥ 20000 was +15 days in the B and +16 in the A group (p = 0.32). Median follow-up time was 128 days. Acute GVHD occurred in 7 (46.7%) patients in the B and in 11 (78.6%) patients in the A group. The most common grade of acute GVHD was grade II for 3 (42.9%) and 8 (72.7%) patients in the B and A groups, respectively. At this time, 24 patients (82.3%) are still alive (13 in the B & 11 in the A group). The causes of death were GVHD in 3 patients (1 in the B and 2 in the A group), relapse (1 patient in the B group) and CMV infection (1 patient in the A group). 4-month overall survival was 92.3% (SE: 7.4%) and 80% (SE: 12.6%) in the B and A groups, respectively (p = 0.4). 4-month Leukemia-free survival was 82.1% (SE: 11.7%) in the B and 80% (SE: 12.6%) in the A group (p = 0.64).

The cumulative incidence of acute GVHD on +12 days was 20% (95% C.I.: 5%-43%) in the B and 64% (95% C.I.: 32%-84%) in the A group that was statistically significant (p = 0.032).
Conclusion: Preliminary results show that omitting consolidation therapy prior to hematopoietic stem cell transplantation has no adverse impact on survival outcome in short-term follow-up of patients, but reduces the cumulative incidence of acute GVHD after transplantation. More cases and longer duration of follow-ups are needed to achieve significant results.

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STEM CELL TRANSPLANT (SCT) OVERCOMES THE POOR PROGNOSIS ASSOCIATED WITH CD25 EXPRESSION IN ACUTE MYELOID LEUKEMIA (AML): ARETROSPECTIVE SINGLE CENTER ANALYSIS

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We have recently identified that expression of CD25 on leukemic blasts as a novel prognostic marker associated with high relapse rate and short relapse free survival (RFS). CD25+ was a more robust predictor of AML relapse (multivariate Cox regression analysis HR 6.54 [1.34-9.15], p = 0.01; FLT3-ITDmut: HR 4.72 [2.04-10.92], p = 0.03). CD25+ leukemic cells resembled behavior of leukemic stem cells (LSCs) as described by Saito et al (Sci Transl Med 2010). We report the effect of stem cell transplantation (SCT) on outcome of pts with CD25+ AML.

We retrospectively examined the impact of SCT in 46 AML patients eligible for induction therapy (excluding APL) in whom CD25 was assessed.

Median age was 61 years (range, 22-84); 19 were (41%) female. CD25 was detected in 17 pts (37%). No difference was seen in the following factors: gender, age, cytogenetics, or presence of